Drude is 4·25°, the theoretical value being 2·972°. When it is borne in mind that the value of the magneto-optic constant derived from reflection experiments has here been applied to test experiments on transmission through films, with results not only of the same order of magnitude, but identical within the limits of uncertainty of the intensity of magnetisation, the agreement must be considered as a very satisfactory vindication both of the theory and of the experiments.

9. It is to be noticed that, as b_1, b_2, b_3 are necessarily real, the imaginary part of $C_0 e^{\omega x}$ must be entirely accounted for by the Hall effect. Hence the present theory involves the supposition that the Hall effect is very much greater for exceedingly rapidly alternating currents than for steady ones. There is nothing unnatural in this supposition, which may be compared with the fact discovered by Maxwell, that the ordinary coefficients of conductivity are very much smaller in the optical circumstances.

"Magnetic Properties of Iron at High Temperatures." By J. HOPKINSON, D.Sc., F.R.S. Received June 10,—Read June 17, 1897.

The present note is for the purpose of correcting two points in my paper in the 'Philosophical Transactions,' A, vol. 180.

First.—I was of opinion that my experiments showed that heating iron above its critical point did not entirely destroy the effects of previous magnetisation. Recent experiments I have made do not confirm this opinion. I would therefore wish to *delete* the following sentences in which the matter is referred to, viz. :—Page 414, lines 12 and 13; the first paragraph on page 454; the first two lines on page 455; the first paragraph on page 457; and from the words "two things" on line 5 to the word "second" on the same page. Also in the 'Proceedings of the Royal Society,' vol. 45, page 321, strike out the two paragraphs at the top of the page.

Second.—I have since been unable to obtain so great recalescence with approximately pure iron as is shown in Curve XXXIX, and can only conclude that I must have been in error as to the composition of the sample examined. I therefore wish in the last paragraph of the paper to speak of the sample as of unknown composition; to strike out the words "This shows why soft iron apparently does not recalesce"; to substitute "this" for "the" and strike out "of the soft iron" in the last line.

I also take the opportunity of correcting an error in the joint paper of myself and Mr. Wilson, vol. 189, pages 109—136. *Delete* the four

lines on page 121 from "The extent" to "0·001," and substitute "The capacity of window glass is but little affected by variations of frequency at ordinary temperatures." The statement as it stands is hardly likely to mislead as it is obviously incorrect; it is unlikely that capacity would increase with frequency.

"On the Distribution of Frequency (Variation and Correlation) of the Barometric Height at diverse Stations." By KARL PEARSON, M.A., F.R.S., University College, London, and Miss ALICE LEE, Bedford College. Received June 15,—Read June 17, 1897.

(Abstract.)

1. Although this paper contains the results of a very large amount of arithmetical work, which has been in progress during the last two or three years, it is not intended in the first place as a contribution to the meteorology of the British Isles. It is especially intended as an *illustration of method.* The authors believe that hitherto no exact theory of variation or of correlation has been applied to meteorological observations, and they have endeavoured to indicate that fruitful results may be obtained from such a theory when applied to one branch at least of meteorology, namely, barometric frequency. They wished to deal with a fairly extended area with an easily accessible material, and this was found in the *Meteorological Observations at Stations of the Second Order* for the British Isles. The "telegraph" stations would have provided better material, but it was far less accessible. The authors have accordingly only dealt with three telegraph stations. The main body of their data was drawn from twenty stations of the second order, four of which are in Ireland, and the remainder distributed round the coast of England, Wales, and Scotland, as indicated on a chart accompanying the memoir.

2. Their first object was to determine the nature of the barometric frequency distribution. By means of tables and plates it is shown that it can be described with a very high degree of accuracy by the use of a generalised frequency curve of the type—

$$y = y_0\left(1+\frac{x}{a}\right)^p e^{-\gamma x},$$

a type which has been fully discussed in a previous memoir on skew variation.

A standard frequency curve for the British Isles having been selected, it is shown that the frequency distribution varies con-